RAILWAY VALUATION AND THE COURTS

III

IF the analysis of the relation between a railroad and the community, contained in a previous paper, is correct, we have an important clue to the significance of the series of decisions in which the Supreme Court has tried to fill in the gaps and ambiguities of the rule in *Smyth* v. *Ames*. The decisions themselves have been often reviewed, and it is not my purpose to discuss them *seriatim*, or in any detail. The discussion will be confined to those general aspects in which the decisions and opinions reflect most clearly the consequences of an attempt to ascertain by juristic speculation what could only have been settled by practical adjustment and compromise.

The most striking feature of these decisions is that nowhere has the Supreme Court ever given a workable definition of the term "fair value," which it said in *Smyth* v. *Ames* was "the basis of all calculations" as to the reasonableness of rates.

The most obvious meaning of that term, to the economist, as well as to the lawyer who approaches the problem by way of the analogy of the law of eminent domain, is of course exchange value. Were we dealing with wheat, or cotton, or pig iron, exchange value could be mathematically ascertained by referring to current quotations. Even when we are dealing with property which is not quoted in the market, it is possible to reach a fair approximation by considering the elements of attractiveness to hypothetical buyers and sellers, and securing an expert judgment on the probable net result. But to ascribe this meaning to the term "value," in a rate case, leads into a logical *impasse*, the nature of which I have already described.[1] The elements of attractiveness which would influence the purchaser of a public utility relate entirely to present and prospective earning power. An expert charged with ascertaining the price at which an established business would be most likely to change hands in an open market would find out its present earning power, and capitalize it at a rate which took into account the probability of a prospective increase or diminution of net earnings. Net earnings, of course,

[1] See "Railway Valuation and the Courts," 33 HARV. L. REV. 902.

depend largely upon the level of rates. But it is precisely the level of rates which the regulating commission is trying to fix. Whenever it reduces rates it reduces earnings, and whenever it reduces earnings it reduces value. Obviously such a rule of rate-making involves us in a hopeless vicious circle. We cannot tell what rates the company is to charge until we know what its value is, and we cannot tell what its value is till we know what rates it may charge.

Practically, perhaps, because of the imperfections of human knowledge and the vagaries of investors, it might be possible to apply such a rule despite its theoretical absurdity. Shares of stock of a public utility, and even the utility itself, may change hands although the rates which the company will be allowed have not yet been determined. Purchasers are willing to take a sporting chance. The result of taking a speculative exchange value of this sort as a rate base would be a curious one. If the investing public is convinced that under the Constitution rates cannot be reduced, that conviction will at once tend to establish a market value. The result will automatically follow that rates cannot constitutionally be reduced, since to reduce them would decrease earnings so that they would no longer bring a fair return on the speculative market value. If the public is convinced that rates must be increased, it will likewise follow that they must be increased. But if a sufficiently effective propaganda is set in motion to convince them that as a matter of law rates may be lowered, the market value will fall, and at once it will be legally possible to reduce rates. Obviously a rule that has such fantastic consequences cannot be seriously considered.

In one of the cases preceding *Smyth* v. *Ames*[2] the Supreme Court seemed for a moment to be trapped in this vicious circle, when it intimated that it would be unconstitutional to take the "use" of a railroad for public purposes at less than the market value.[3] Outside of this *dictum*, the court has never in terms approved the theory. In other quarters, however, although the logical fallacy of a rule of rate-making has been often exposed,[4] it still has vigorous champions.[5]

[2] Reagan *v.* Farmers' Loan & Trust Co., 154 U. S. 362, 410 (1894).

[3] See the passage quoted, *supra*, p. 908.

[4] See especially WHITTEN, VALUATION OF PUBLIC SERVICE CORPORATIONS, § 57, and HALE, VALUATION AND RATE-MAKING, ch. 1, 80 COLUMBIA UNIV. STUDIES IN HISTORY, etc., ch. 1.

[5] See especially Stevens, The Valuation of Railroad Right of Way, and the Valuation Brief submitted to the Interstate Commerce Commission by the President's Conference Committee, for recent expositions of this point of view.

So persistent is the theory that one suspects there must be some significance to it which mere logic fails to destroy. It must satisfy some objective which its proponents have at heart, and which the bare formula does not reveal.

To find out what lies behind the theory, a slight shift in our method of approach is necessary. Theoretically, the rule calls for an inquiry into an ultimate fact, exchange value, the price, that is, at which the property as a whole would change hands. Practically it calls for a piecemeal appraisal of a number of factors which, in the judgment of the appraisers, would appeal to a hypothetical purchaser.

Assume, for instance, two railroads, both operating between the same terminal cities. One runs through mountainous, sparsely settled country, the other through populous plains. The first was more expensive to build, and it is more expensive to operate and maintain. Moreover, it is forced to rely almost entirely on through traffic, whereas the second road has profitable short haul business to eke out its earnings. Yet for commercial reasons the rate between the terminal cities must be the same over both roads. If it were not, the road with the lower rate would get all the traffic. Obviously in appraising the property we must disregard the level of freight rates, since the freight rates themselves are in issue. But at any level of rates (as long as the level is the same for both roads), the road with the lower operating costs and denser traffic will have the greater earnings, and hence the greater exchange value. Its strategic location, with reference to the physiography of the country as well as to the currents of commerce, is therefore an element of value which advocates of the theory believe should be constitutionally protected.

Assume, again, two railroads between the same termini, one under a management which has a reputation for public spirit and integrity, the other in the hands of financial pirates. The first has been able in the course of years to build up an operating staff, which contains the best railroad men in the country, and the personality of its president and the wise policy of its directors have combined to create an *esprit de corps* which cannot be duplicated. The other is managed by discontented and second rate men, and is rent with faction and intrigue. Here again, whatever the level of rates, the first road has an element of value which the second lacks, and which the usual process of physical valuation would fail to reveal.

In the two instances I have given the existence of a less efficient road is believed to give the more efficient one an increment of value. The less efficient railroad may, however, be only potential. To take a stock example, imagine a railroad built through a narrow gorge between precipitous mountains. There is no competing railroad, but if one is ever built, it will be necessary to build a tunnel at great expense, since the gorge is already occupied to its full capacity. According to the advocates of the exchange value theory, the right to occupy the gorge has a value measured by the difference between the cost of laying tracks in the gorge, and the cost of tunnelling the mountain. The argument, moreover, goes further. Fortunate physical location, density of traffic, efficient organization and leadership, are elements of value wherever they may be found, whether there are competitors, existing or potential, or not. They are factors, that is, which an intelligent purchaser would consider in deciding what to pay for the property. Whatever the rate, they add to the value of the railroad.

The practical result of this piecemeal exchange value theory is that after all the physical property of a carrier has been appraised at its present value, the appraisers, in their expert capacity, proceed to estimate the value of each of the intangible elements which a purchaser would consider in setting a price. The sum total of these intangible elements plus the value of the physical property is the "value" of the railroad as a going concern, and it is a result in which the level of freight rates has been disregarded, and hence, it is believed, the vicious circle avoided.

The validity of this belief rests on the assumption that the "intangible" factors which I have described have a measurable exchange value, which can be expressed without reference to the level of freight rates. To test this assumption let us return to the railroad with a right of way through the gorge between impassable mountains. Assume first that the mountains are literally impassable, and that the cost of tunnelling or circumventing them is such that the traffic would not bear a rate high enough to earn a return on this cost. What, now, is the value of the right to occupy the gorge? Suppose that the gorge is still in the hands of the original settler, and the promoter is attempting to purchase it. He will arrive at the value somewhat as follows: He will estimate the probable annual net earnings of the whole road, and will capitalize them

at a rate which takes into account the risk of unexpected loss and the chance of unexpected gain. From this capital sum he will deduct the estimated cost of building the whole road, excepting only the cost of acquiring the gorge. The balance is the largest sum which he will be justified in offering for the gorge. How large this balance will be depends upon the expected net earnings, and these depend directly on the level of freight rates. If rates are not regulated, the promoter will offer, and the settler, if he is shrewd, will demand, the difference between the cost of the road and the capitalized net earnings when rates are as high as the traffic will bear. If rates are regulated, he will offer a sum ranging all the way down to the value of the land for farming purposes, the exact sum depending upon the level of freight rates which the regulating body will allow. Here, clearly, we have not escaped the vicious circle.

The situation is not changed if we assume that the cost of tunnelling the adjoining mountains is not prohibitive. In such a case the amount which the prospective purchaser will offer will be calculated in precisely the same manner, except that the upper limit will depend not upon the highest rate the traffic will bear, but upon the cost of tunnelling the mountain. He will under no circumstances offer more than this cost. He may not offer as much, if the regulating commission reduces the rate which he may charge to a point at which it would not bring a fair return on such a price. The vicious circle is still there. We are still trying to determine rates by ascertaining value, and we are still unable to ascertain value until we know what the rates will be.

Is the situation any different if we assume that the mountain actually has been tunnelled, and that a competing line is already in operation? If we assume that the line through the tunnel is allowed to charge a schedule of rates high enough to pay its operating expenses, and earn a fair return on its cost of construction, and that the line running through the gorge is allowed to charge the same schedule of rates, it cannot be denied that the strategic location of the latter road gives it an increment of exchange value, over and above the physical investment, which is both real and readily ascertainable. The difficulty is that the assumption is one that we have no right to make. We cannot assume that rates will be high enough to pay the cost of operation and fixed charges on the most expensive line in existence between two given points. It is

just as reasonable to suppose that the cheapest line between the two points will govern the rate. If we indulge in the latter assumption, the "strategic location" of the road running through the gorge will not add anything to the physical investment, and the line through the tunnel may be worth much less than it cost. We are back again in the vicious circle. We are still unable to tell what exchange value, if any, the right to occupy the gorge may have, until we know what rates the road will be allowed to charge.

The same reasoning applies to the other "intangible" factors which I have described. Denser traffic and lower operating costs due to the commercial or physical geography of the country, higher operating ability, and better *esprit de corps*, doubtless confer increments of value if we assume that the road with the lighter traffic and the higher operating costs is to govern rates. But the assumption cannot be made. It would be entirely possible (and indeed eminently sensible) for the community to say that its traffic should go entirely on the road which could carry it the most cheaply and efficiently, and that if anyone else ventured to build a competing road, it was up to him to operate the road as cheaply as the cheapest in existence, or forego his profits. It is possible, of course, that traffic might grow so large that the railroad with low operating costs could no longer handle it. But even there we cannot assume that the community would sanction the construction of a less efficient railroad by a less efficient company. It might appeal to the duty of a common carrier to handle all traffic that is properly tendered, and compel the efficient railroad to extend its facilities. Even if the increment of traffic could be handled only at an increasing cost (even if, for instance, the railroad between the mountains would have to widen the gorge at great expense), it would not follow that the cost of handling the increment would set the rate for all the traffic. Rates would be raised, perhaps, but only to a point at which they would pay for the average cost of all traffic, and bring a reasonable return on the whole investment, old as well as new. Such a rate policy would entirely wipe out any increment of value arising out of strategic location or greater operating efficiency.

It follows that any attempt to value separately these "intangible" elements, without reference to the level of freight rates, is entirely illusory. All that an expert appraiser can ascertain is the relation between the value of a railroad which has these intangible elements

of value, and the value of an existing or potential competing railroad which does not have them. He can make up an algebraic formula somewhat as follows: Let P equal the value of the physical property of Railroad A, and X the sum of its "intangible" values. Let V equal the exchange value of Railroad B, considered as a going concern. The appraiser can ascertain that Railroad B, because of lighter traffic and higher costs, is worth (under uniform rates) say three fourths of the value of Railroad A. His equation will then be: $\frac{3}{4}(P + X) = V$, or $X = 4/3V - P$. Now according to hypothesis V depends upon the level of rates, and is therefore a variable. And with V a variable, the equation is necessarily indeterminate, and the task of ascertaining X impossible.

Such being the case, it is not surprising to find that when expert appraisers report the value of a railroad's "good will" or of its "strategic location" or the value arising from the fact that it is a "going concern," they are never able to indicate the rational process by which the result is reached. They almost always resort to a general and inarticulate exercise of judgment. The report of the master in chancery, quoted by the court in *Des Moines Gas Co.* v. *Des Moines*,[6] is typical. He found that the value arising out of the fact that the gas company was a going concern was $300,000. "I think," he said, "that a seller would not be willing to sell unless he got that much more than its physical value, but I could not give the mental process by which this conclusion is reached any more than a jury could do so, but it is nevertheless my judgment under all the evidence in the case."

There are some decisions and *dicta* of the Supreme Court which can be explained only on the assumption that the court had in mind a theory of piecemeal exchange value of the kind I have just outlined. The question of strategic location of a railroad has never been passed upon. *San Joaquin Co.* v. *Stanislaus County*[7] presents, however, a close analogy. A water company had acquired, the court assumed by prescription, the right to draw water up to a certain quantity from the San Joaquin River. The county regulated water rates under a statute, and in a suit which was carried up to the United States Supreme Court, the company contested the rates on the ground that they were confiscatory. The decision turned on whether the water rights had a value which should be taken into

[6] 238 U. S. 153, 163 (1915).

[7] 233 U. S. 454 (1914).

account for rate-making purposes. The Supreme Court held that they had, and overturned the county's rate schedule. The court did not pass upon the exact value of the water rights. The master in chancery considered them "worth" fully $1,000,000, but the report of the case does not reveal how the figure was obtained. Undoubtedly the rights had a considerable value for other than "public utility" purposes. The riparian owners presumably would be willing to pay a certain price for them, without any thought of selling or distributing the water for profit. Such a value corresponds, in our illustration of the railroad running through a gorge, to the value of the gorge as farming land. But if a larger value was allowed, as seems to have been the case, it must have been because the court considered that the demand for the water on the part of public utility companies, for distribution further inland, had enhanced the value. But the intensity of the demand on the part of these water companies would depend directly upon the price they were allowed to charge. In the San Joaquin case the state constitution declared that water appropriated for sale was appropriated for public use. The price was therefore subject to regulation. It is difficult to see how the master could have made any finding as to the value of the water right (assuming that he gave it a value above what the riparian owners would pay for it), without first making up his mind what rates would be reasonably charged.[8]

The other instance in which the court seems to have been influenced by the theory of piecemeal exchange value is in its treatment of the increment of value arising from the fact that the company is a "going concern."

The court's record on this subject is somewhat confused. Three supposedly separate intangible elements of value — franchise value, good will, and "going value" have been separately treated. In *Willcox* v. *Consolidated Gas Co.*[9] a number of gas companies had combined under authority of a statute which fixed the capital of the consolidated corporation at not more than "the fair aggregate value

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[8] *Cf.* the analogous case of a water power company, in possession of the only available source of water power, and supplying power in competition with steam power. The exchange value theory would place a value on the water rights of the company equal to a capitalization of the difference between the cost of producing steam power and water power. There have been several such cases in Wisconsin. See a detailed discussion in HALE, p. 71 *ff.*

[9] 212 U. S. 19 (1909).

of the property, franchises and rights" of the constituent companies. The companies agreed on a franchise valuation of $7,781,000, and stock was issued accordingly. Some years later a legislative committee reported that in its judgment this was a reasonable figure. The court held that the franchise could not now be valued at a higher figure than that fixed at the time of the consolidation, but it stated unequivocally that "the courts ought now to accept the valuation of the franchises fixed and agreed upon" by the companies. The *dictum* is an arbitrary one, and seems to rest on no more than a kind of estoppel by act of a legislative committee — surely a novel doctrine in American public law. The court made it clear, however, that the case was not to be considered a precedent except on identical facts, and in no subsequent case has it ever allowed any increment of value under the name of franchise value.

In this same case the court disposed of the second of these intangible elements, good will. Following Judge Hough, in the district court, it rejected the item of good will as an element in valuation, on the ground that good will exists only in a competitive business, and not in a business in which the consumer has no choice but to patronize the company. The reasoning is not satisfactory. Good will can exist in a monopolistic business. It represents the predisposition of the public to patronize the company, and a company in sole possession of the field will find it worth while to spend money in advertising and solicitation merely to encourage this disposition and bring persons who have not been using gas at all to subscribe. There is, moreover, always the indirect competition of other methods of illumination to be considered.

The controversy in the Supreme Court, however, has mainly centered about the item of "going value." In *Knoxville* v. *Knoxville Water Co.*,[10] decided the same day as the Willcox case, the lower court had added an item of $60,000, about ten per cent of the appraised value of the physical property, under the heading "going value." This item, the court said, "we understand to be an expression of the added value of the plant as a whole over the sum of the values of its component parts, which is attached to it because it is in active and successful operation and earning a return." The court found, however, that even assuming that the item was properly included, the rates complained of were not confiscatory, and de-

[10] 212 U. S. 1 (1909).

clined to express an opinion as to whether or not it was properly included. In addition the court below had included $10,000 as "organization expenses," and this item also the court declined to pass upon.

In *Omaha* v. *Omaha Water Co.*[11] the court was reviewing litigation arising out of a franchise allowing the city of Omaha to take over the water company at an appraised valuation. The Supreme Court held that the valuation should include an item of $562,712.45 (somewhat under ten per cent of the whole valuation), on account of "going value." In this case the franchise expressly excluded any franchise value from the purchase price. The court said:

"The option to purchase excluded any value on account of unexpired franchise; but it did not limit the value to the bare bones of the plant, its physical properties, such as its lands, its machinery, its water pipes or settling reservoirs, nor to what it would take to reproduce each of its physical features. The value in equity and justice must include whatever is contributed by the fact of the connection of the items making a complete and operating plant. The difference between a dead plant and a live one is a real value, and is independent of any franchise to go on, or any mere good will as between such a plant and its customers." [12]

It is clear from the language that the court had in mind not only an excess over the junk value (or as the court puts it, the "bare bones" of the plant), but an excess over the cost of reproducing the individual items of physical property. But the opinion and the reported facts leave it in doubt whether the cost of reproducing the individual items included the so-called "overhead" costs, such as legal expenses of organization, interest on the investment during construction, engineering superintendence, etc. In the Knoxville case, it will be recalled, "organization expenses" were separately stated. In view of the later cases, it is important to bear this in mind.

In *Cedar Rapids Gas Co.* v. *Cedar Rapids*,[13] the company claimed that its physical property was "worth" $365,564, whereas the municipal experts gave it a value of $278,621. Included in the former valuation, but not in the latter, were items totalling $56,038 representing interest during construction and expenses of promo-

[11] 218 U. S. 180 (1910).

[12] *Ibid.*, 202.

[13] 223 U. S. 655 (1912).

tion and supervision.[14] The company claimed in addition an increment of $100,000 for "going value." The Iowa Supreme Court found a total value "somewhere between $300,000 and $350,000, and sustained a rate schedule estimated to bring somewhat more than seven per cent on the former and six per cent on the latter valuation. Since some of the physical items were in dispute, it is impossible to tell what sum the court added as "going value," nor to what extent, if any, it exceeded the overhead costs above mentioned. The ultimate fact which it purported to find was "the value of the system as completed, earning a present income." But "in so far as influenced by income, however, the computation must be made on the basis of reasonable charges." "Good will" was expressly excluded, in deference to the Consolidated Gas case. This decision of the Iowa Supreme Court the United States Supreme Court affirmed, Mr. Justice Holmes observing:

"An adjustment of this sort under a power to regulate rates has to steer between Scylla and Charybdis. On the one side if the franchise is taken to mean that the most profitable return that could be got, free from competition, is protected by the Fourteenth Amendment, then the power to regulate is null. On the other hand if the power to regulate withdraws the protection of the Amendment altogether, then the property is nought. This is not a matter of economic theory, but of fair interpretation of a bargain. Neither extreme can have been meant. A midway between them must be hit."[15]

The case in which "going value" has received the most extended discussion is *Des Moines Gas Co.* v. *Des Moines*.[16] In this case the master in chancery who reported the facts included in his valuation an item of fifteen per cent of the physical value under the title "overhead." He included in this item promotion costs and legal expenses, engineering costs of preparation and superintendence, insurance against liability and compensation during construction, cost of administration during construction, contingencies, and the interest on the investment while it was unproductive. He then tentatively added another sum of $300,000, which he estimated as the value arising out of the fact that the company "possessed a well

[14] See Gas Light Co. *v.* Cedar Rapids, 144 Iowa, 426, 120 N. W. 966 (1909), for a more detailed statement of facts than is contained in the United States Supreme Court reports.

[15] 223 U. S. 655, 669, 670 (1912).

[16] 238 U. S. 153 (1915).

developed and paying business." "It is worth that much more," he said, "than a plant would be that had to develop its business." But on reconsideration he excluded this item, apparently because of the decision in the Cedar Rapids case. The Supreme Court sustained this final disposition of the matter. It said:

"That there is an element of value in an assembled and established plant, doing business and earning money, over one not thus advanced, is self-evident. This element of value is a property right, and should be considered in determining the value of the property, upon which the owner has a right to make a fair return when the same is privately owned although dedicated to public use."

But it concluded that in view of the allowance of 15 per cent for "overhead" expenses, "it cannot be said, in view of the facts of this case, that the element of going value has not been given the consideration it deserves."

As yet the decisions are not inconsistent with the theory that "going value" is an item which represents the investment in general overhead expenses not directly traceable to specific items of physical property, although the language of the court does imply that it is the existence of customers, and the harmonious operation of the property, which accounts for the added value. In *Denver* v. *Denver Union Water Co.*,[17] however, there is a direct decision that an item must be allowed in addition to these overhead expenses.

In this case it is stated that the physical valuation included the costs of producing the structures under competitive bidding, plus the engineering and superintendence costs, and to this value was added $800,000 as "going concern" value. The Supreme Court justified this item by quoting, without further comment, the language in the Des Moines case. It is clear that the sum was intended to represent not a part of the cost of reproducing the property, but an increment arising out of the fact that the company was "doing business and earning money."

It is curious that this result, so difficult to justify on any rational grounds, should have been reached with so little analysis of terms or discussion of principles. What difference is there between value arising out of the fact that the company is "doing business and earning money," allowed in the Denver case, and value due to the fact that it has many customers, rejected in the Willcox case, or

[17] 246 U. S. 178 (1918).

value due to the fact that it has a franchise which permits it to do business and earn money, partly rejected and partly accepted in the Willcox case? And what was it that the court rejected in the Cedar Rapids case and the Des Moines case, if it was not value arising out of business and earnings? The only ground the court has ever given for including "going value" is that a plant in operation and with customers is "worth more" than a plant without business. That is obviously true, but why should the difference be *added* to the appraisal of the physical property? Does the court really mean that a plant, with its full complement of physical equipment, but without personnel or business, is "worth" what it would cost to build it, and that a plant in full operation and with customers is therefore worth considerably more? Surely a plant without customers, and without a strategic location which will attract customers, is worth much less in the market than the cost of producing it. No business man in his senses will build at all unless he is sure of a substantial amount of business. It is only when a plant has a franchise to operate, when it is a "going concern," when it has a "strategic location" and a "good will" sufficient to attract customers, that we can reasonably expect it to be worth what it cost. To embody these items in an increment of value to be added to the cost of construction is sheer duplication.

The result reached by the court may perhaps be attributed to the manner in which cases of this sort usually come up. The record almost invariably contains an engineering report in which each item of physical property is separately scheduled, with a figure set against it to represent the present reproduction cost of the items, due allowance being made for overhead charges. It also contains a separate figure based upon expert testimony as to the intangible value of the plant as a going concern. Since a plant with business is obviously "worth more" than the bare physical structure described in the engineering record, it seems reasonable to add the two figures to obtain the final result. The engineering record is accepted as one of the facts in the case, without realizing that the appraisals which it contains necessarily imply a plant in full operation, with franchise, customers and good will. And the appraisal of intangibles is accepted as another fact supported by expert testimony, without realizing that from the nature of the case the experts could not have reached any conclusion as to the value of the busi-

ness without first making up their minds as to the proper level of rates.

The Supreme Court's adherence to the exchange value theory is, however, limited to these special intangible elements of value. None of the cases indicate any inclination to base rates on the market value of the plant taken as a whole. When the court has spoken of the "fair value" of the whole plant, it is clear that it has intended to designate some other quality of the plant, of which, perhaps, the exchange value of the intangible elements might form a part, but which, in itself, was something other than exchange value.

Is it possible to discover an intrinsic quality of railroad property, which leaves earnings entirely out of account, and to which the term "value" can be applied? The physical plant is always there, the land, the rolling stock, the stations and freight houses, and they have a value apart from their earning power as constituent parts of a railroad. The buildings could be razed, the equipment sold as junk, and the land put on the market. Perhaps in the aggregate a railroad scrapped and sold in this way would yield ten or fifteen per cent of what it cost. But it is equally clear that the Supreme Court did not attach any such meaning to the term "value." The court has repeatedly said that it is not the "bare bones" of the plant that must be valued, but its value as a going concern must be ascertained, its value as a railroad, not as scrap iron and farm land.

The view is generally held that what the Supreme Court meant was neither change value, nor scrap value, but the "present value," *i.e.* the present cost of reproducing the property. Superficially the theory seems attractive. It appears to break the vicious circle by divorcing value entirely from earning power, and resting it on a pure appraisal and engineering estimate. Certainly there is much in Supreme Court language, and a good deal in Supreme Court decisions, which looks in this direction. Let us disregard the *dicta* in *Smyth* v. *Ames*, calling for a consideration of original cost, capitalization, market value of securities, etc., and the various *dicta* intimating that reproduction cost was merely a preliminary or evidentiary step toward ascertaining a further and different fact known as value. The court has held that the test of the value of land is not its original cost, but the price which it would bring

today.[18] In most of the cases before the court the appraisal was in fact made on the reproduction theory, and the court has not expressed disapproval of the theory, but has confined its discussion to individual disputed items. In a recent case a majority of the court expressly approved "the propriety of estimating complainant's property on the basis of present market values as to land, and reproduction cost, less depreciation, as to structures."[19] There are some decisions and *dicta* inconsistent with this view. The court has held that where gas mains were originally laid in unpaved streets, and a few years later pavements were laid at the city's expense, the hypothetical expense of ripping up and relaying these mains was not an item to be included in the value of the mains, although clearly it would be an element in the cost of reproducing the plant.[20] As to land the court has expressly rejected the reproduction (or rather reacquisition) test, since it involved addition of speculative increments based on the probable excessive cost of acquiring land for public utility purposes.[21] Instead, it takes the market value of adjoining property. But with these modifications the court has on the whole stood by the reproduction less depreciation test.

A closer examination, however, reveals many theoretical difficulties, on which Supreme Court decisions throw but little light. A railroad was built fifty years ago into the wilderness. Its terminals were small settlements, and a few scattered homesteads lay along its path. Now the country is thickly populated, and the small settlements have become cities with thousands of inhabitants. The problem is to ascertain what it would cost to build the railroad through this populated territory today. What conditions shall the engineer who makes the estimate assume? He must, of course, assume present costs of materials and labor. Shall he assume present physical and economic conditions of the territory through which the road is to be built? When the original road was built, the right of way ran through virgin forests. Now there is cleared and level farming land. Shall the present cost of cutting and grubbing a hypothetical strip of virgin forest be included in the valua-

[18] Willcox *v.* Consol. Gas Co., 212 U. S. 19 (1909); Minnesota Rate Cases, 230 U. S. 352 (1913).

[19] Denver *v.* Denver Union Water Co., 246 U. S. 178, 191 (1918).

[20] Des Moines Gas Co. *v.* Des Moines, 238 U. S. 153 (1915).

[21] Minnesota Rate Cases, 230 N. S. 352, 452 (1913).

tion? Today the road runs through the heart of a city, with sky-scrapers, parks and valuable residences on either side. To reproduce the railroad we must first wipe it out of existence. Can we assume that the right of way is a bare strip of land? Must we not assume that it also is covered with hypothetical skyscrapers, parks and residences, and that the cost of reproducing the road includes the cost of tearing down the buildings, however valuable, and paying compensation to the owners? Fifty years ago there were large stretches of swamp land, and it was necessary to carry on extensive engineering operations to make a solid foundation for the roadbed. Today the land has been drained by the government. Must we reconstruct a hypothetical swamp? When the road was built men, materials and supplies were hauled many miles in ox teams. Today they could be delivered in car-load lots on freight trains. Is it the present cost of ox teaming or the present cost of rail transportation that is to govern?

One reservation we can perhaps make. The railroad itself, which we are valuing, we must assume to be non-existent. Even if we can assume that other railroads are available to carry rails and cross ties and labor to the scene of construction, we cannot assume that the road we are reproducing is available. But how far can we drive the consequences of such a hypothetical elimination? In estimating the market value of the surrounding real estate are we to assume that the railroad is not in existence? Millions of dollars' worth of factory sites would be wiped out on such an assumption. Whole cities may have grown up merely because the railroad developed their commerce and industry, and whole suburban regions because the railroad made them available for commuters. Shall we assume that these cities and suburban districts are still present and flourishing, or must they, also, be hypothetically wiped out, and the value of the railroad land reduced accordingly?

A solution of these perplexing problems is impossible so long as we have before us the bare phrase, "cost of reproduction less depreciation." No mere grammatical interpretation of its content will help us, for the content is not sufficiently rich to contain the solution. We must go back of the phrase and look for the underlying considerations of policy out of which it has grown. But such an inquiry only presents further difficulties. Why should a railroad have a constitutional claim to a fair return on the present cost of

reproducing it? It has been suggested that there is an ethical principle by which the public is entitled at all times to the service at the present cost of producing that service. In a competitive business that is, very roughly, the measure of remuneration. In a business in which competitors are kept out, the same measure should be applied. This would lead, however, to a test based not on the present cost of reproducing that particular physical property, but on the cost of reproducing a plant capable of rendering equivalent service. That is not the test generally applied.[22] Moreover, it would require a theory of reproduction cost new, not of reproduction cost less depreciation. A hypothetical competitor must build a new plant. He cannot buy one second hand. The Supreme Court, however, has decided that depreciation must be deducted from the cost of reproduction new.[23] But waiving these discrepancies, is there anything logically compelling about the theory? Have we any right to assume that the community is willing at all times to pay for a service at its present cost of reproduction? Would a railroad be built at all, today, into the heart of New York City if skyscrapers and residences had to be razed to build it? Would we not perhaps content ourselves with a passenger terminal in the outskirts, easily reached by subway or elevated lines? Railroads are not generally built through full-grown cities. They are built while the city is young, while construction is cheap, and as population increases the railroad and the city mutually adapt themselves to each other along the lines of least resistance.

The Supreme Court has nowhere made any articulate inquiry into the underlying considerations of theory or policy on which its doctrine of reproduction less depreciation rests. Hence we have no principle to guide us in deciding the disputed questions which I have enumerated. To hold that for purposes of construction every railroad is deemed to be in existence except the one we are valuing is purely arbitrary. It makes the final result depend entirely on the accident of ownership. If all the railroads serving a given territory are under common ownership, so that for purposes of rate-making they are valued as a whole, they must all be deemed to be non-existent for construction purposes. If they are separately owned, and are valued separately, each one in turn must

[22] See Whitten, "Fair Value for Rate Purposes," 27 HARV. L. REV. 419.

[23] Knoxville *v.* Knoxville Water Co., 212 U. S. 1 (1909).

be deemed non-existent and all the others in operation. On the other hand, to "reproduce" all or even a substantial portion of the railroads at once, as a single national system, would involve a sudden strain on the labor and material market which would itself enormously enhance the hypothetical cost of reproduction. In short, the cost of reproduction rule, however solidly it seems at first to rest on arithmetic and engineering data, is in truth not a rule at all. It does not point to any rationally ascertainable conclusion. The conclusion depends upon which one of a great number of possible sets of hypothetical conditions we are to assume, and the rule gives us no assistance in determining which particular set we are to select.

In a recently published study[24] Mr. Robert Hale has made a valiant attempt to reconcile the exchange value theory and the reproduction cost theory, and to establish the resultant on a rational basis. Mr. Hale thinks that there is such a thing as the exchange value of the physical plant, divorced from all "intangible" elements, and that this value can be ascertained without becoming enmeshed in the vicious circle of values and earnings.

Mr. Hale asks us to conceive of a plant, completed and ready for operation, and in the hands of an owner who has no franchise right to operate it. He asks us to imagine further a man in possession of a franchise right to operate a public utility, but with no physical plant to operate. The price at which the owner of the plant-less franchise would buy the franchise-less plant, Mr. Hale denominates the exchange value of the physical property. Mr. Hale points out that since the owner of the franchise has the alternative of himself building a new plant, the exchange value of the plant cannot under any circumstances exceed the present cost of reproducing an equally efficient substitute (due allowance being made, of course, for depreciation). And since the owner of the franchise will not under any circumstances pay more than the capitalized prospective earning power of the business, the exchange value may be less than the cost of reproduction. The exchange value of the physical property, then, is its reproduction cost less depreciation, provided that is not more than the capitalized prospective earning power.

Mr. Hale does not contend that the exchange value, so defined,

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[24] Valuation and Rate-Making, ch. 1.

has been adopted by any court as the basis of rate-making, or even that it should be. His contention is that it could be adopted, without logical fallacy, since it provides an ascertainable quality which can be termed "value," and since it avoids the vicious circle of the market value theory. It seems to me that even this modest claim cannot be sustained. It is true that the hypothetical owner of a plant-less franchise would not pay more for a plant than the cost of building an equally efficient substitute. But the utmost figure which a purchaser will pay is not a fair criterion of exchange value. We must consider also the lowest figure which the seller will take. Obviously the owner of a franchise-less plant has no possible use for the plant himself. As a last resort he can sell it for junk, but unless he sells it, it is worth nothing to him. When a purchaser and a seller approach each other under these conditions, there is no possible method of estimating what the exchange price will be. All we can tell is that it will range somewhere between reproduction cost less depreciation, and junk value. At what point between these limits the parties will strike a bargain depends upon their relative trading ability, the intensity of their respective desires to part with or acquire the property, their ability and willingness to wait, and similar factors. Such a property has no ascertainable exchange value. Mr. Hale has simply taken the upper limit of the possible range of price, and called it exchange value.

Of course it is possible to conceive of a situation in which this upper limit would be the price at which the property would change hands. There might be some other use to which the property could be put, just as lucrative as the use covered by the franchise. Or there might be several competing owners of plant-less franchises bidding for the plant. But the first supposition is almost invariably contrary to fact. The second is possible, but the possibility should not be taken into account in establishing a general constitutional rule. The number of franchises which a state may grant is entirely within its own discretion. It is entirely free to decline to grant more than one franchise to operate in a given field. If it has granted more than one franchise, it is entirely free to revoke all franchises but one, either under the reserved power in the state constitution or by eminent domain, and such revocation cannot be complained of by the owner of physical property suitable for use under the franchise, however much the market value of his physical

property may have been impaired. And if we may assume the existence of several franchises and only one plant, why may we not with equal propriety assume several plants and one franchise? In such a case, in a free market the exchange value of the plants would be close to their junk value.

The second part of Mr. Hale's thesis seems to me to be equally untenable. The argument is that while the exchange value of the physical property will certainly never exceed the reproduction cost less depreciation, it may be less than this sum, if the anticipated net earning power of the whole business (the plant operated under the franchise) is not sufficient to promise a fair return on the cost of reproduction. The consequence which Mr. Hale draws from the argument is that while the government cannot *reduce* rates which do not bring a fair return on the cost of reproduction less depreciation, it can never be compelled to *increase* rates, since the exchange value of the physical property will itself be governed by the existing level of rates. Here it seems to me that Mr. Hale has not succeeded in escaping the vicious circle. The owner of the franchise will not bid more than the capitalized prospective earnings, but these earnings depend on prospective rates. If the purchaser is convinced that the commission and the courts will allow rates which bring in a fair return on the full reproduction value, he will pay that value rather than lose the plant. If he is not so convinced, he will pay less. We may assume, perhaps, that a commission has announced its determination not to permit an increase in rates. But this announcement will not influence the sagacious buyer, who has access to learned counsel, for he must know that unless the rates are constitutionally correct the courts will upset them. In other words, to establish the validity of this thesis, we must first assume its validity.

I do not think it is possible to read with an open mind the series of Supreme Court decisions on valuation, beginning with *Smyth* v. *Ames*, without coming to the conclusion that the court has failed to accomplish what it set out to do. The court started with the problem of enunciating a legal principle which would preserve the authority of the state to regulate rates, and yet restrain that authority within reasonable limits. It was under the necessity of so formulating this principle that it would rest on a finding of fact, rather than on an exercise of political discretion. The fact which

it selected was the "fair value" of the property. That the first case in which the rule was formulated contained no intelligible directions by which the fact could be ascertained is not a conclusive argument against the rule. The facts in *Smyth* v. *Ames*, as interpreted by the court, were such that rates would have been confiscatory under any definition of value. It is a common and a wholesome practice for courts to state new doctrines in general and perhaps ambiguous form, leaving to the process of exclusion and inclusion in subsequent cases the development of the precise limits and implications of the rule. My quarrel with the rule in *Smyth* v. *Ames* is that twenty years of active judicial elaboration has failed to reveal any logical principle, or any consistent basis of policy on which the rule rests, and according to which it can be interpreted and developed. Only a very few of the doubtful questions which it raises have been settled by Supreme Court precedents, and they have been settled arbitrarily. It is impossible to forecast how the court will decide the questions which are still open. That is not the result which we should expect from a rule founded on a fixed and ascertainable fact.

Our excursion into imaginative history in the previous installment of this paper gives us the clue to the true reason for this failure. The relation between the public utility and the community cannot be expressed in terms of a simple, quantitatively ascertainable fact, for the relation involves numerous and complex factors which depend on compromise and practical adjustment rather than on deductive logic. The whole doctrine of *Smyth* v. *Ames* rests upon a gigantic illusion. The fact which for twenty years the court has been vainly trying to find does not exist. "Fair value" must be shelved among the great juristic myths of history, with the Law of Nature and the Social Contract. As a practical concept, from which practical conclusions can be drawn, it is valueless.

IV

If it is true that as a matter of economic and legal theory the doctrine of *Smyth* v. *Ames* is fallacious and fair value a juristic illusion, several consequences of a practical nature are forced upon us. I shall deal primarily with two, each of immediate and pressing importance.

The first consequence is one that must be faced by the legislature.

When a constitutional theory has led a court into a twenty-year search for a fact which does not exist, when the outcome of these twenty years of active litigation is that most of the practical questions upon which a regulating commission desires guidance are as yet undecided, and when no indication has been given of what the future may bring, the time has come to consider whether it is wise to continue a relation between the railroads and the public which is based upon such a theory. A serious defect in our traditional system of rate regulation has always been its uncertainty. In an industry in which speculative profits are no longer possible, the great essential of financial health is certainty of earnings. The volume of traffic and the level of operating expenses, two of the three factors which directly affect railroad earnings, must to a certain degree depend upon unforeseeable contingencies, but there is no reason why the third factor, the level of rates, should remain uncertain. A system of regulation in which the level of freight and passenger rates becomes the fortuitous outcome of a process of juristic speculation upon the missing terms of an ambiguous contract cannot produce certainty. The investor cannot tell upon what level of rates to calculate the prospective earning power of the stock he is purchasing. He cannot even tell whether the equity upon which he supposes his stock to be based may not be completely wiped out by a subsequent decision of the Supreme Court. The lack of any certain rule of rate-making is recognized as one of the major factors in the instability of railroad finances.

To anyone who is able to free his vision of the hazy juristic concepts which surround the current theory of public utilities, it must be apparent that the terms of the public utility relation are intolerably vague. No rational group of business men would today enter into an undertaking on such a basis. Imagine a contract, let us say, for the construction of a large modern warehouse, which merely provides that the contractors shall build an "adequate" and "serviceable" structure, and shall receive in return "just" and "reasonable" compensation, the adequacy of the structure and the reasonableness of the compensation to be determined by the courts, from time to time, as particular questions come before it in actual litigation. Obviously the contractors would find it impossible to induce bankers to finance such an undertaking.

The whole policy of private ownership and public regulation

of American railroads is now undergoing the most searching criticism. There are counts in the indictment, which seem to me to be valid, and which go far beyond the features I have attacked in this paper. If, however, the policy is to survive, it seems to me clear that the least that can be done is to render certain and specific, once and for all, the particulars of the relation between the railroads and the public. It will not be enough to place a definite valuation upon the railroads for rate-making purposes. The valuation is merely one among many terms of the relation which are now indefinite. The whole contract, as to the nature of which the Supreme Court has for twenty years been speculating, must be set down in black and white, with all the clarity and certainty which the best legal draftsmanship can achieve. The contract must state what elements are to affect the valuation in the future, whether, for instance, appreciation of existing investment is to be included, and if so how it is to be measured, or whether only new investment is to be recognized. The rate of return must be stated in cents on the dollar, not in vague formulae. There must be a detailed formulation of the risks which the railroad companies are to assume and the risks which are to fall on the community. There must be an explicit definition of the standard of service which the stipulated compensation is to cover, and a careful machinery for adjusting compensation where a higher standard of service is required or sanctioned by the government. The disposition of annual surpluses and deficits must be taken care of. Every item which is now enveloped in doubt and ambiguity must be made certain and unequivocal.

Clearly this means that the formulation of the incidents of the public service relation must cease to be a matter of constitutional theory. The relation must in some way be drawn out from under the Fifth and Fourteenth Amendments. Either by voluntary agreement or by compulsory reorganization under the federal power of eminent domain, the vague constitutional fetters which the courts have woven about the subject must be shaken off.

It is apparent that no such result was achieved or even aimed at in the Esch-Cummins legislation passed by Congress and approved by the President last February.[25] In instructing the Interstate Commerce Commission to divide the country into rate

[25] Transportation Act, 1920.

groups, and to fix rates in each group so that they will bring a stated percentage of return on the "value" of the railways in that group,[26] the law marks an advance in the direction of certainty, but it is only a slight one. It will still be the duty of the Interstate Commerce Commission, and ultimately of the Supreme Court, to determine from time to time that elusive and imaginary quantity, the "value" of the railroads. There is no authority either for compulsory reorganization by eminent domain, or for an agreement setting at rest for the future the ambiguities of the public utility relation.

The second practical consequence of the nature of the public utility relation, as I have analyzed it in this paper, is one that must be faced by the courts. Whether under the Esch-Cummins Act and the Valuation Act, or under some new policy of reorganization or nationalization, it will before long be necessary for the Supreme Court to determine what value should be allowed for the railroads of the United States, as a basis of regulation or condemnation. The circumstance that the problem is logically insoluble, that "fair value" as a juristic concept signifies nothing, will not relieve the court of its duty under the Constitution. A practical decision must be reached, however intellectually distasteful the task may be.

Whether the valuation is for purposes of rate regulation, or for purposes of condemnation, will not substantially alter the problem. The traditional measure of just compensation in eminent domain cases is of course market value, yet it does not seem possible that this measure will be applied in the case of property subject to state regulation. If it were applied to the railroads in their present condition, the railroads themselves would be the first to deny its validity, for the market value of the railroads as measured by the market price of stocks and bonds is exceedingly low. The Supreme Court has said that an attempt to reduce the just compensation due to the owners of a public utility, by first reducing their rates below the level of reasonableness, cannot succeed,[26] and the converse must be equally true, that inflated market value due to unreasonably high rates cannot be recognized. Market value under reasonable rates seems the only sound measure of just compensa-

[26] Section 15a of the Act to Regulate Commerce, as amended by the Transportation Act, 1920.

tion, but it is a measure which throws us back again on the formula of *Smyth* v. *Ames*. Even railroad nationalization will not relieve the courts of the necessity of fixing the "fair value" of the railroads.

Yet the fact that "fair value" is a myth, that it cannot be scientifically ascertained by observation and induction, that it is in reality merely a cloak which conceals a process of arbitrary decision based on considerations of policy, cannot be without its influence on the judicial method of approach to the problem. That the decision must turn largely upon considerations of justice and policy which cannot be juristically formulated, is a circumstance which should influence the court to widen largely the scope of discretion accorded to the non-judicial body which in the first instance conducts or directs the valuation. If Congress formulates general principles of rate-making or of compensation, the court should not upset these principles merely because it is of opinion that a different formulation would be juster. The principles formulated by Congress should stand unless so clearly unfair as to outrage the common sense of justice. If a commission is appointed to investigate the relevant facts, to negotiate with the railroad interests, and to fix a fair and workable measure of compensation, and if it appears that the commission has examined the evidence honestly and impartially, and has given all parties a fair hearing, and if it does not appear that the commission has been influenced by legal theories which are clearly erroneous, then the Supreme Court should, it seems, give a very wide latitude to the discretion of the commission. I do not mean merely that findings of fact if supported by evidence should be sustained. I mean that conclusions based upon considerations of justice and policy should not be overruled unless utterly beyond the pale of fairness and common sense. We must bear in mind constantly that a constitutional yardstick by which the valuation can be measured does not exist. The value of property devoted to the public service is in its nature indeterminate, subject to the will of the very government which is ascertaining it. Valuation must be regarded as a task which is largely legislative and administrative, in which the judgment of Congress, or of an administrative tribunal which adheres to the forms of due process, must within wide limits of discretion be deemed conclusive.

It is true that such an attitude on the part of the Supreme Court would necessitate a departure from the traditional conception of

the respective functions of court and of legislature in eminent domain cases, as well as in rate-regulation cases. "The legislature may determine," the Supreme Court has said,[27]

"what private property is needed for public purposes — that is a question of a political and legislative character; but when the taking has been ordered, then the question of compensation is judicial. It does not rest with the public, taking the property, through Congress or the legislature, its representative, to say what compensation shall be paid, or even what shall be the rule of compensation. The Constitution has declared that just compensation shall be paid, and the ascertainment of that is a judicial inquiry."

Property engaged in an enterprise of which the earnings depend on state regulation is, however, in its nature different from property of the usual kind. It has voluntarily surrendered its value as ordinary private property. When the land, the cross ties, the rails and building materials, and the other forms of "private" property were converted into an operating public utility plant, they assumed a new form and acquired a new kind of "value." Their value became, within constitutional limits, precisely what the legislature or its administrative agency declared it to be. That there are constitutional limits must of course be conceded; the court has so held. But from the nature of the case those limits must be flexible. The constitutional function of the courts should be merely to guard against a rule of compensation so outrageous as to shock the common sense of justice. This peculiar characteristic of property devoted to public uses affords a clear ground for an exception to the general rule of the Monongahela case.

I have expressed no opinion, in this paper, as to what value should be placed upon the railroads, nor as to the considerations which should govern in determining their value. I have discussed merely the constitutional limitations which should surround such a determination. My plea is that the formulation of principles and weighing of policies should be entrusted to an administrative body, acting under general instructions from Congress, and frankly and honestly basing its conclusions upon considerations of public policy, rather than to a court, acting upon principles which bear a delusive semblance of juristic precision, but which from the nature

[27] Monongahela Navigation Co. *v.* United States, 148 U. S. 312 (1893).

of the case can be no more than inarticulate expressions of the political or economic view of the judges. My hope is that the court may recognize the essential legislative character of the problem, and reserve for itself only the modest task of keeping the legislative discretion within decent bounds.

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